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NOTICE OF ALLOWANCE AND FEE(S) DUE

23373

7590

11/15/2010

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

NASH, LASHANYA RENEE

ART UNIT

PAPER NUMBER

2492

DATE MAILED: 11/15/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,162	12/31/2003	Misao Shiina	Q79094	6962

TITLE OF INVENTION: IP ROUTER, COMMUNICATION SYSTEM AND BAND SETTING METHOD USED THEREIN AND ITS PROGRAM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/15/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

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Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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23373 7590 11/15/2010
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2100 PENNSYLVANIA AVENUE, N.W.
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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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10/748,162	12/31/2003	Misao Shina	Q79094	6962

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APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/15/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
NASH, LASHANYA RENEE	2492	709-238000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB-122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB-47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
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4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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10/748,162	12/31/2003	Misao Shiina	Q79094	6962
23373	7590	11/15/2010	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NASH, LASHANYA RENEE	
			ART UNIT	PAPER NUMBER
			2492	

DATE MAILED: 11/15/2010

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1144 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1144 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/748,162

Examiner

LASHANYA R. NASH

Applicant(s)

SHIINA, MISAO

Art Unit

2492

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 28 July 2010.
2. ☒ The allowed claim(s) is/are 1,3-7,9-18,20 and 21.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Philip J Chea/
Primary Examiner, Art Unit 2492

/LaShanya R Nash/
Examiner, Art Unit 2492

DETAILED ACTION

This notice of allowance is in response to amendment filed 28 July 2010. Claims 1, 3-7, 9-18, 20 and 21 are presented for further consideration.

Response to Arguments

The rejection of claims 18-19, under 35 USC 101 are withdrawn in light of the amendments.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Marina Zalevsky (Reg. No. 53,825) on 3 November 2010.

The application has been amended as follows:

1. (currently amended): An Internet Protocol (IP) router including an IP routing table which stores routing information for connecting a plurality of client devices with an original server which is at least an origin of supplying a content and with a plurality of mirror servers into which the content supplied from the original server is

copied, and an IP routing function which performs an IP routing of a received packet according to the IP routing table, the IP router comprising:

means for ending a connection relating to a packet output from a specific port of a client device and obtaining request information of a content requested by the client device;

means for confirming whether the plurality of mirror servers of the original server exists corresponding to the obtained request information;

means for selecting, if the plurality of mirror servers exists, an optimum server, from among the mirror servers, for the request information based on information which is to be an index for selecting an optimum server and based on the routing information;

means for obtaining the content by connecting with the selected optimum server;

means for transferring the obtained content to the client device;

means for detecting a change in a network topology based on a change in the IP routing table;

means for altering a selection criteria of the optimum server only when the change in the network topology is detected; and

means for altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.

7. (currently amended): A communication system comprising:

a plurality of client devices;

an original server which at least serves as an origin of supplying a content;

a plurality of mirror servers which mirror servers copy and hold the content supplied from the original server; and

an Internet Protocol (IP) router including an Internet protocol (IP) routing table which stores routing information for connecting the plurality of client servers with the original server and with the plurality of mirror servers via a network, and an IP routing function which performs an IP routing of a received packet according to the IP routing table, wherein the IP router includes:

means for ending a connection relating to a packet output from a specific port of a client device and obtaining request information of a content requested by the client device;

means for confirming whether the plurality of mirror servers of the original server exists corresponding to the obtained request information;

means for selecting, if the plurality of mirror servers exists, an optimum server, from among the mirror servers, for the request information based on information which is to be an index for selecting an optimum server, and based on the routing information;

means for obtaining the content by connecting with the optimum server selected;

means for transferring the obtained content to the client device;

means for detecting a change in a network topology based on a change in the IP routing table;

means for altering a selection criteria of the optimum server only when the change in the network topology is detected; and

means for altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.

13. (currently amended): A band setting method of an Internet Protocol (IP) router including an IP routing table which stores routing information for connecting a plurality of client devices with an original server which at least serves as an origin of supplying a content and with a plurality of mirror servers, into which the content supplied from the original server is copied, and an IP routing function which performs an IP routing of a received packet according to the IP routing table, the band setting method comprising:

ending a connection relating to a packet output from a specific port of a client device, and obtaining request information of a content requested by the client device;

confirming whether the plurality of mirror servers of the original server exists corresponding to the obtained request information;

selecting, if the plurality of mirror servers exists, an optimum server, from among the mirror servers, for the request information based on information which is to be an index for selecting an optimum server and based on the routing information;
obtaining the content by connecting with the selected optimum server;
transferring the obtained content to the client device;
detecting a change in a network topology based on a change in the IP routing table;
altering a selection criteria of the optimum server only when the change in the network topology is detected; and
altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.

18. (currently amended): A non-transitory computer readable storage medium storing software program for setting a band by an Internet Protocol (IP) router which sets a band when connecting a plurality of client devices with an original server which is at least an origin of supplying a content and with a plurality of mirror servers which copy and hold the content over a network based on routing information of an IP routing table provided in the IP router, which software program when executed by a computer of the IP router causes the computer to perform operations comprising:

ending a connection relating to a packet output from a specific port of the client device, and obtaining request information of a content requested by the client device;
confirming whether the plurality of mirror servers of the original server exists corresponding to the obtained request information;
selecting, if the plurality of mirror servers exists, an optimum server, from among the mirror servers, for the request information based on information which is to be an index for selecting an optimum server and based on the routing information;
obtaining the content by connecting with the selected optimum server;
transferring the obtained content to the client device;

detecting a change in a network topology based on a change in the IP routing table;

altering a selection criteria of the optimum server only when the change in the network topology is detected; and

altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.

Reasons for Allowance

Claims 1, 3-7, 9-18, 20 and 21 are allowed. The following is an examiner's statement of reasons for allowance. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claim 1 is directed to an Internet Protocol router that performs IP routing of a received packet and selecting an optimum server from a plurality of mirror servers. Applicable prior art of record discloses updating selection criteria for mirrored servers based on routing table information. However, the Examiner asserts that the claimed router is patentably distinguishable over the prior art of record as the router comprises a means for detecting a change in the network topology based on the a change in the IP routing table; and a means for altering a selection criteria of the optimum server only when the change in the network topology is detected. The aforementioned features in the

particular manner and combination recited in the claims are considered patentably distinct over the cited prior art. Therefore, the claims are allowed.

Claim 7 is directed to a system comprising an Internet Protocol router that performs IP routing of a received packet and selecting an optimum server from a plurality of mirror servers. Applicable prior art of record discloses updating selection criteria for mirrored servers based on routing table information. However, the Examiner asserts that the claimed system is patentably distinguishable over the prior art of record as the router comprises a means for detecting a change in the network topology based on the a change in the IP routing table; and a means for altering a selection criteria of the optimum server only when the change in the network topology is detected. The aforementioned features in the particular manner and combination recited in the claims are considered patentably distinct over the cited prior art. Therefore, the claims are allowed.

Claim 13 is directed to a method and claim 18 is directed to a corresponding computer-readable storage device. The claims are directed to embodiments for employing an Internet Protocol router that performs IP routing of a received packet and selecting an optimum server from a plurality of mirror servers. Applicable prior art of record discloses updating selection criteria for mirrored servers based on routing table information. However, the Examiner asserts that the claimed system is patentably distinguishable over the prior art of record as the router comprises a means for detecting a change in

the network topology based on the a change in the IP routing table; and a means for altering a selection criteria of the optimum server only when the change in the network topology is detected. The aforementioned features in the particular manner and combination recited in the claims are considered patentably distinct over the cited prior art. Therefore, the claims are allowed.

The remaining claims 3-6, 9-12, 14-17 and 20-21 depend from claims 1, 7, 13, and 18 respectively, and incorporate the novel and non-obvious features described above. Accordingly, these claims are also allowable.

Furthermore, Examiner notes that Applicant's specification provides support for the means plus function limitations under 35 USC 112, sixth paragraph. Specifically:

- means for ending a connection relating to a packet output from a specific port of a client device and obtaining request information of a content requested by the client device (Specification; page 15, lines 21-25);

- means for confirming whether the plurality of mirror servers of the original server exists corresponding to the obtained request information (Specification; page 16, lines 4-6);

- means for selecting, if the plurality of mirror servers exists, an optimum server, from among the mirror servers, for the request information based on information which is to be an index for selecting an optimum server and based on the routing information (Specification; page 15, lines 1-5);

- means for obtaining the content by connecting with the selected optimum server (Specification; page 15, lines 6-14);

- means for transferring the obtained content to the client device (Specification; page 15, lines 6-14);

means for detecting a change in a network topology based on a change in the IP routing table (Specification; page 18, lines 4-10);

means for altering a selection criteria of the optimum server only when the change in the network topology is detected (Specification; page 23, lines 11-17); and

means for altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria (Specification; page 15, lines 17-20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LASHANYA R. NASH whose telephone number is (571)272-3957. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571) 272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/748,162
Art Unit: 2492

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/LaShanya R Nash/
Examiner, Art Unit 2492
November 3, 2010

/Philip J Chea/
Primary Examiner, Art Unit 2492